

**WHAT IS CLAIMED IS:**

1. A nail varnish composition comprising, in a cosmetically acceptable medium, at least one film-forming polymer, wherein the nail varnish composition is capable of forming a film having a rate of mass loss of less than 0.5 mg/minute when the film is subjected to abrasion produced with a Taber abrasimeter at 23°C.
2. The nail varnish composition according to Claim 1, wherein the film exhibits a rate of mass loss of less than 0.2 mg/minute.
3. The nail varnish composition according to Claim 2, wherein the film exhibits a rate of mass loss of less than 0.1 mg/minute.
4. The nail varnish composition according to Claim 1, wherein the at least one film-forming polymer has at least a glass transition temperature ranging from -150°C to 0°C.
5. The nail varnish composition according to Claim 4, wherein the at least one film-forming polymer has at least a glass transition temperature ranging from -80°C to 0°C.
6. The nail varnish composition according to Claim 4, wherein the at least one film-forming polymer has an additional glass transition temperature greater than 0°C and less than or equal to 150°C.
7. The nail varnish composition according to Claim 6, wherein the at least one film-forming polymer has an additional glass transition temperature ranging from 10°C to 100°C.
8. The nail varnish composition according to Claim 1, wherein the nail varnish composition is capable of forming a film having a Young's modulus ranging from 10 to 200 MPa.

9. The nail varnish composition according to Claim 8, wherein the nail varnish composition is capable of forming a film having a Young's modulus ranging from 10 to 100 MPa.

10. The nail varnish composition according to Claim 9, wherein the nail varnish composition is capable of forming a film having a Young's modulus ranging from 10 to 50 MPa.

11. The nail varnish composition according to Claim 1, wherein the nail varnish composition is capable of forming a film having a fracture energy ranging from  $220 \times 10^5$  to  $1,000 \times 10^5$  J/m<sup>3</sup>.

12. The nail varnish composition according to Claim 11, wherein the film has a fracture energy ranging from  $240 \times 10^5$  to  $1,000 \times 10^5$  J/m<sup>3</sup>.

13. The nail varnish composition according to Claim 1, wherein the nail varnish composition is capable of forming a film having a breaking strain ranging from 300 to 2 000%.

14. The nail varnish composition according to Claim 13, wherein the nail varnish composition is capable of forming a film having a breaking strain ranging from 500 to 2 000%.

15. The nail varnish composition according to Claim 1, wherein the nail varnish composition is capable of forming a film having a loss of gloss, after 10 seconds of the abrasion with the Taber abrasimeter, of less than or equal to 14%, the gloss being measured before and 1 hour after the abrasion.

16. The nail varnish composition according to Claim 15, wherein the nail varnish composition is capable of forming a film having a loss of gloss, after 10 seconds of the abrasion with the Taber abrasimeter, of less than or equal to 12%.

17. The nail varnish composition according to Claim 16, the nail varnish composition is capable of forming a film having a loss of gloss, after 10 seconds of the abrasion with the Taber abrasimeter, of less than or equal to 10%.

18. The nail varnish composition according to Claim 17, wherein the nail varnish composition is capable of forming a film having a loss of gloss, after 10 seconds of the abrasion with the Taber abrasimeter, of less than 6%.

19. The nail varnish composition according to Claim 1, wherein the at least one film-forming polymer is chosen from polyurethanes, polyureas, and polyurea-urethanes.

20. The nail varnish composition according to Claim 1, wherein the at least one film-forming polymer is chosen from polycondensates formed by polycondensation:

- of at least one diisocyanate chosen from linear and branched C<sub>1</sub>-C<sub>12</sub> alkyl diisocyanates, C<sub>4</sub>-C<sub>20</sub> cycloalkyl diisocyanates, and C<sub>6</sub>-C<sub>20</sub> aryl diisocyanates;
- of at least one prepolymer comprising at least two functional groups comprising at least one labile hydrogen, having a number-average molecular mass ranging from 500 to 50,000;
- of at least one coupler comprising two functional groups comprising at least one labile hydrogen, having a molecular mass of less than 500.

21. The nail varnish composition according to Claim 20, wherein in the at least one prepolymer, the at least two functional groups comprising at least one labile hydrogen are chosen from diols and primary and secondary diamines.

22. The nail varnish composition according to Claim 20, wherein the at least one prepolymer has a number-average molecular mass ranging from 500 to 8,000.

23. The nail varnish composition according to Claim 22, wherein the at least one prepolymer has a number-average molecular mass ranging from 1,000 to 3,000.

24. The nail varnish composition according to Claim 20, wherein in the at least one coupler, the two functional groups comprising at least one labile hydrogen are chosen from diols, primary and secondary diamines, and amino alcohols.

25. The nail varnish composition according to Claim 20, wherein the at least one coupler has a molecular mass of greater than or equal to 50 and less than 500.

26. The nail varnish composition according to Claim 25, wherein the at least one coupler has a molecular mass of greater than or equal to 75 and less than 500.

27. The nail varnish composition according to Claim 20, wherein the at least one diisocyanate is chosen from hexamethylene diisocyanate, isophorone diisocyanate, dicyclohexylmethane diisocyanate, toluene diisocyanate, diphenylmethane diisocyanate, dicyclohexylmethane diisocyanate, and tetramethylxylene diisocyanate.

28. The nail varnish composition according to Claim 20, wherein the at least one prepolymer is chosen from (poly(tetramethylene oxide))diols comprising from 10 to 80 tetramethylene oxide units; polydimethylsiloxanes comprising at least one end group chosen from (C<sub>2</sub>-C<sub>8</sub>)alkyleneamino(C<sub>2</sub>-C<sub>8</sub>)alkyl groups and C<sub>2</sub>-C<sub>8</sub> ω-hydroxyalkyl groups; and hydrogenated polybutadienes comprising at least one hydroxyl end group.

29. The nail varnish composition according to Claim 20, wherein the at least one prepolymer is non water-soluble.

30. The nail varnish composition according to Claim 20, wherein the at least one coupler is chosen from butanediol, neopentyl glycol, amino ethanol, propylene glycol, ethylene glycol, diethylene glycol, triethylene glycol, and cyclohexanedimethanol.

31. The nail varnish composition according to Claim 20, wherein the at least one prepolymer and the at least one coupler are present in the at least one film-forming polymer in an amount such that the prepolymer/coupler molar ratio ranges from 1:1 to 1:5 and the

(prepolymer + coupler)/diisocyanate molar ratio ranges from 0.9:1 to 1.1:1.

32. The nail varnish composition according to Claim 31, wherein the at least one film-forming polymer is chosen from polyurethanes.

33. The nail varnish composition according to Claim 20, wherein the at least one film-forming polymer is such that the at least one prepolymer, the at least one diisocyanate, and the at least one coupler are present in the at least one film-forming polymer in the following molar proportion:

the at least one prepolymer: 1;

the at least one diisocyanate: from 2 to 6; and

the at least one coupler: from 1 to 5.

34. The nail varnish composition according to Claim 20, wherein when the (prepolymer + coupler)/diisocyanate molar ratio is less than 1, the free isocyanate groups are blocked by reaction with at least one compound comprising at least one labile hydrogen.

35. The nail varnish composition according to Claim 34, wherein the at least one compound comprising at least one labile hydrogen is ethanol.

36. The nail varnish composition according to Claim 1, wherein the at least one film-forming polymer has a number-average molecular weight of less than or equal to 300,000.

37. The nail varnish composition according to Claim 36, wherein the at least one film-forming polymer has a number-average molecular weight ranging from 10,000 to 150,000.

38. The nail varnish composition according to Claim 1, wherein the at least one film-forming polymer is present in an amount ranging from 0.1% to 60% by weight, relative to the total weight of the composition.

39. The nail varnish composition according to Claim 38, wherein the at least one film-forming polymer is present in an amount ranging from 0.1% to 40% by weight, relative to the total weight of the composition.

40. The nail varnish composition according to Claim 1, further comprising at least one additional film-forming polymer chosen from sulphonamide resins, alkyd resins, and cellulose esters.

41. The nail varnish composition according to Claim 1, further comprising at least one plasticizing agent.

42. The nail varnish composition according to Claim 1, comprising at least one organic solvent medium.

43. The nail varnish composition according to Claim 42, wherein the at least one organic solvent medium is anhydrous.

44. The nail varnish composition according to Claim 42, wherein the at least one organic solvent medium comprises at least one organic solvent chosen from ketones, alcohols, glycols, propylene glycol ethers, short-chain esters, ethers, alkanes, aromatic cyclic compounds, and aldehydes.

45. The nail varnish composition according to Claim 1, comprising at least one aqueous medium.

46. The nail varnish composition according to Claim 1, comprising at least one cosmetic additive chosen from thickening agents, coloring matters, fillers, spreading agents, wetting agents, dispersing agents, antifoams, preservatives, UV-screening agents,

active agents, surfactants, moisturizing agents, perfumes, neutralizers, stabilizers and antioxidants.

47. A cosmetic method for making up and/or non-therapeutic care of nails, comprising applying to the nails at least one layer of nail varnish comprising, in a cosmetically acceptable medium, at least one film-forming polymer, wherein the nail varnish is capable of forming a film having a rate of mass loss of less than 0.5 mg/minute when the film is subjected to abrasion produced with a Taber abrasimeter at 23°C.